



Ohio Environmental Protection Agency

Division of Solid and Infectious Waste Management

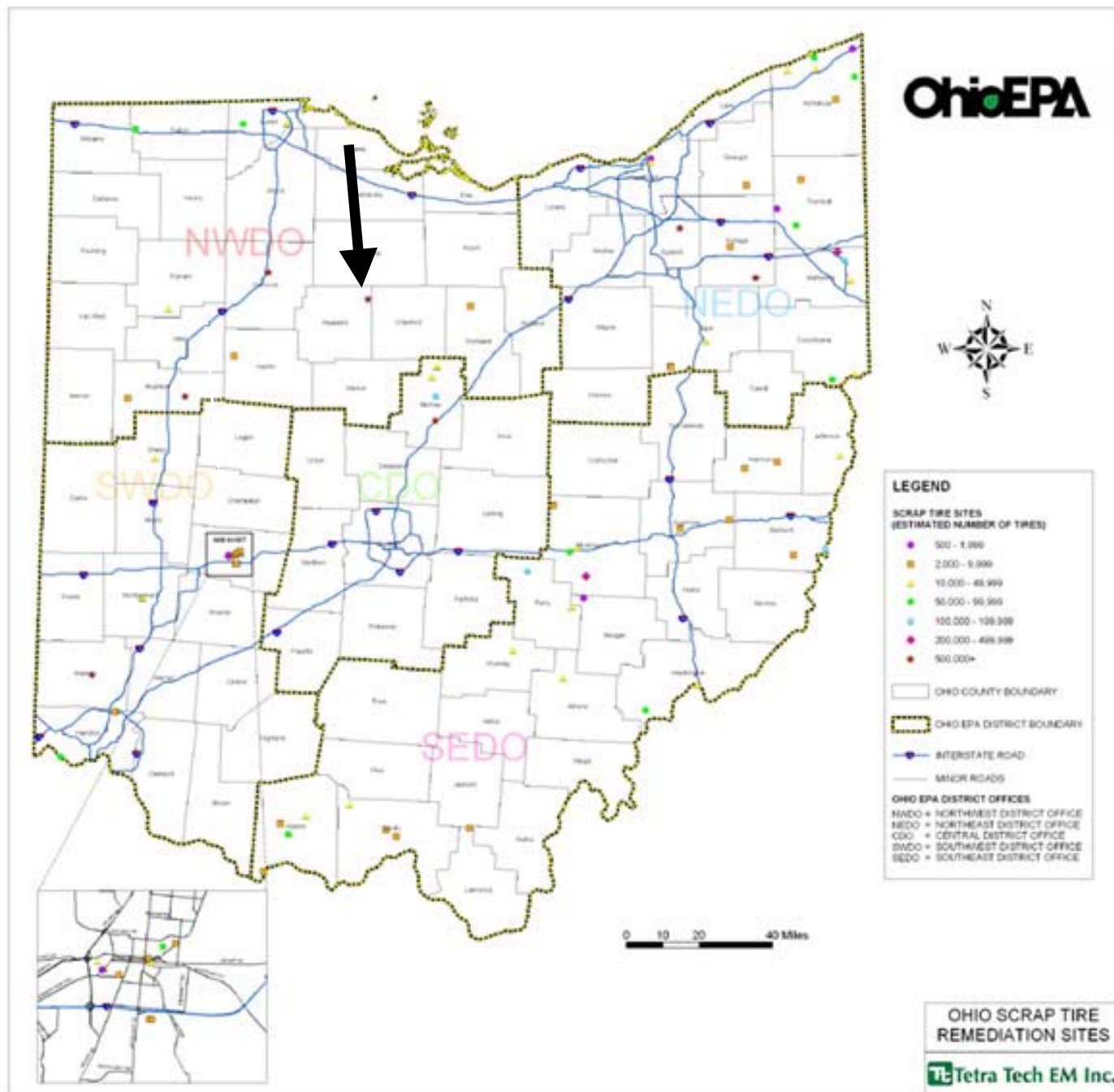
Kirby Tire Fire & Cleanup



Wyandot County, Sycamore, Ohio

Arrow points
to Kirby site

Also shows
wind direction
on day of fire





- 140 acres
- Piles up to 40 feet high
- Approximately 21 million PTEs

Site History

- Site began in early 1950s
- Periodic efforts by Health Department to limit pile size and create fire lanes
- County Board of Health Orders, September 1993, to remove tires
- Ohio scrap tire laws effective October 1993
- Ohio scrap tire rules effective March 1996



History Continued

- State of Ohio filed complaint in Wyandot County Court of Common Pleas June 1997
- July 1997 Court Order with deadlines to remove all tires
- July 1998 State filed Charges of Contempt
- September 1998 Court Order for Kirby's to cease acceptance of scrap tires
- July 1999 State of Ohio began removing tires
- August 21, 1999 arson fire

Kirby Tire Fire

- August 21st, 2:00 AM On-Site Security Guard discovered fire
- Local Fire Departments and Citizens initiated response
- Environmental contractor mobilized
- U.S. EPA took responsibility at 11:00AM

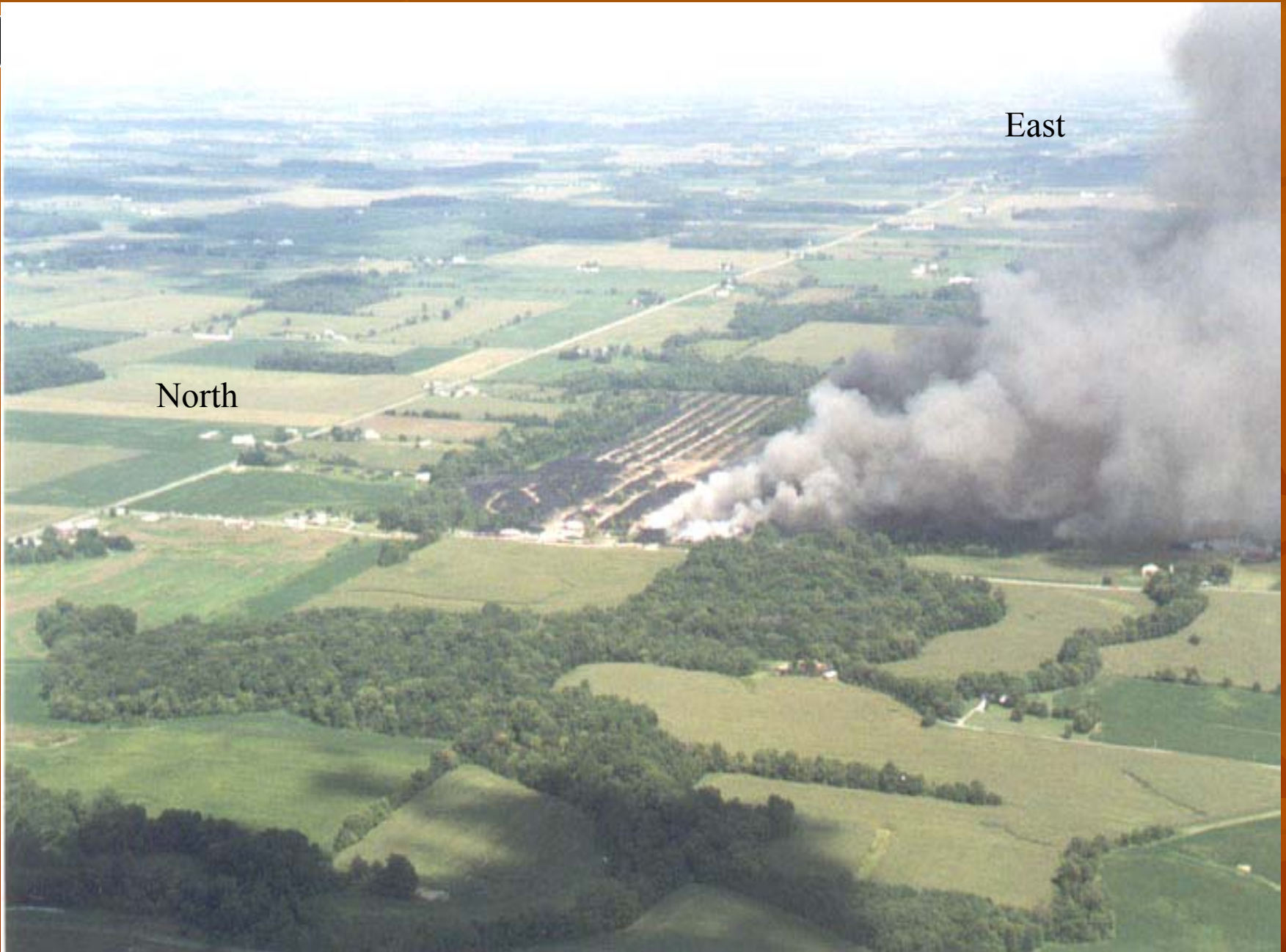
Kirby Tire Fire

- Local Response
- 20 Local Fire Departments
- 22 pieces of heavy equipment
- 34 local citizens



North

East



Kirby Tire Fire

- **Air Monitoring**
 - Continuous Air Monitoring in work zones and in a five mile radius downwind
 - Volatile Organic
 - Particulates
 - No exceedences of OSHA Action Levels



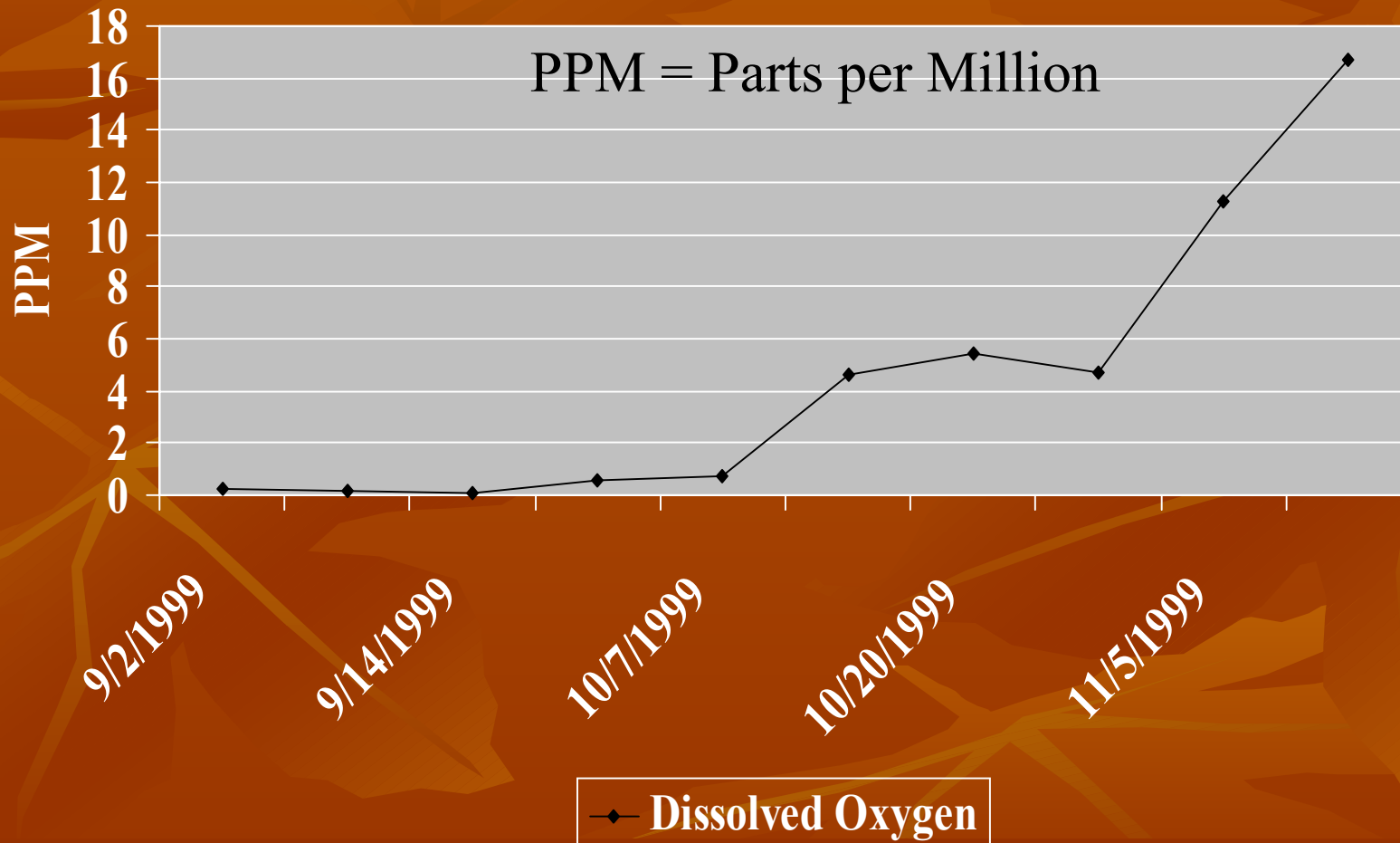
Kirby Tire Fire

- Discharges to Sycamore Creek
 - Aug 22 and 23
 - Via field drainage tiles
 - Trench dug looking for addition field tiles
 - Backfilled with compacted clay to create barrier
 - Fish kill for 7 1/2 miles downstream
 - Siphon dams and aeration systems installed



Kirby Tire Fire

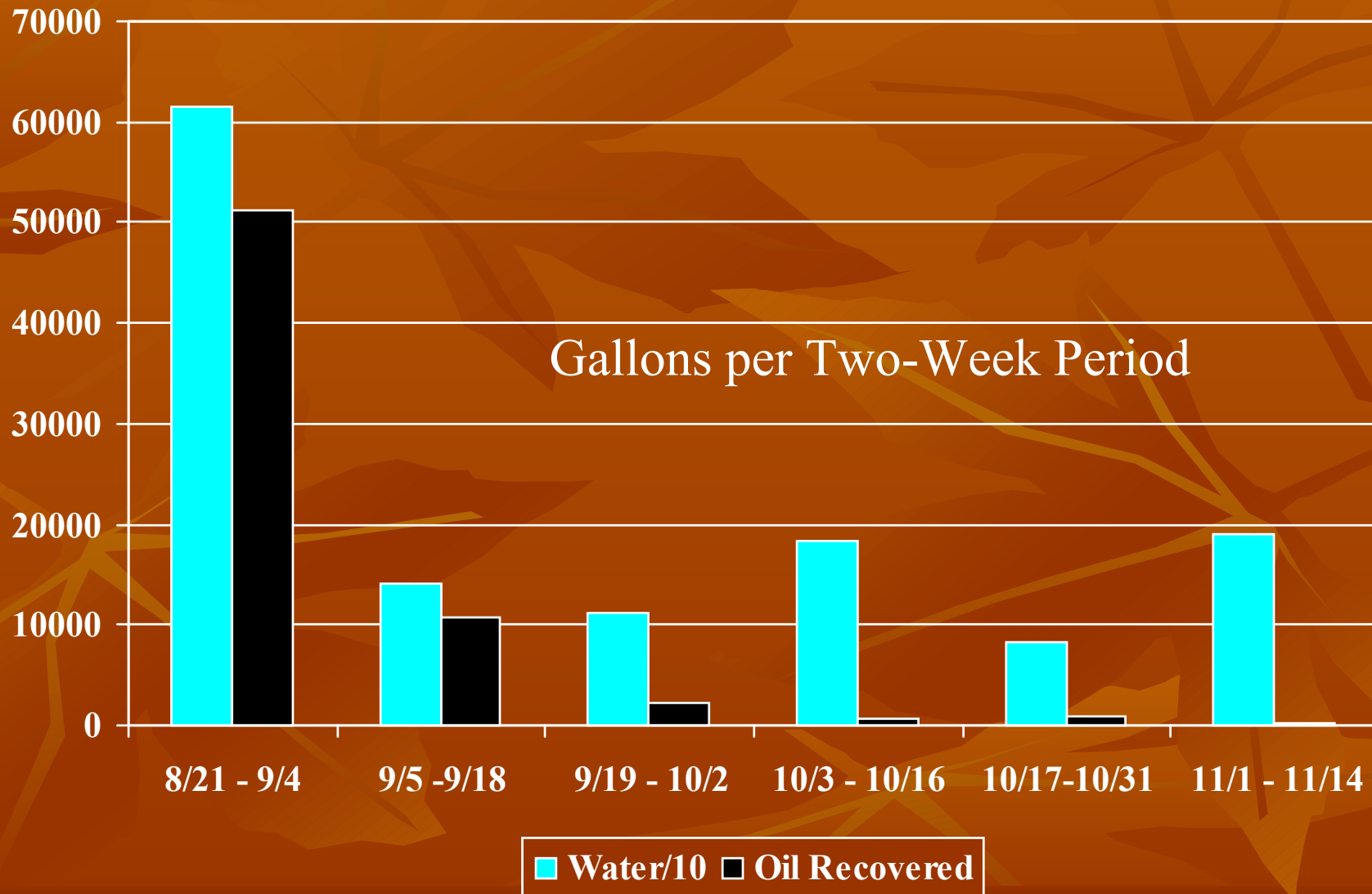
Dissolved Oxygen Monitoring







Gallons/10 of Water Processed Gallons of Oil Recovered



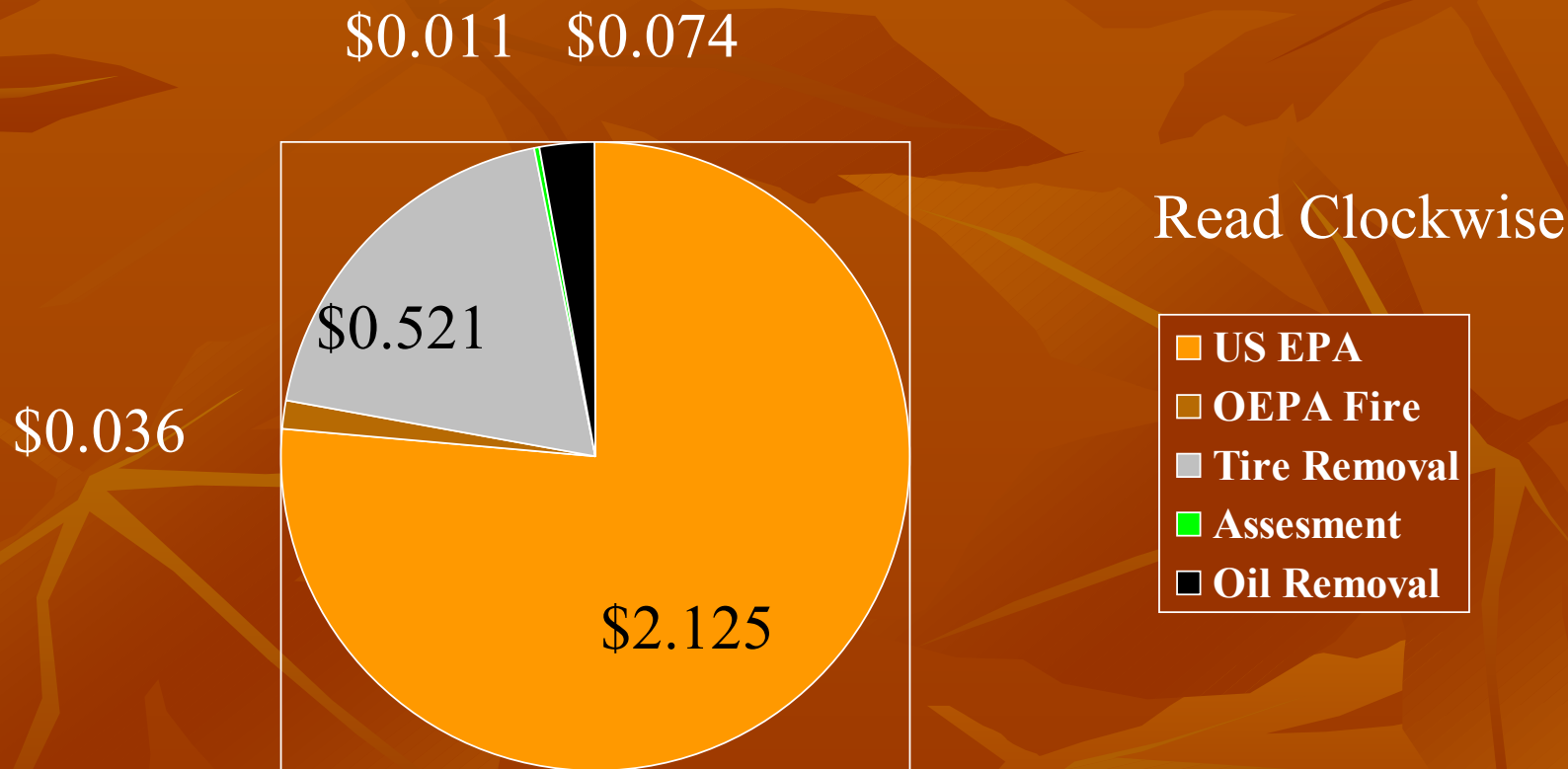
Kirby Tire Fire

- Subsurface clay layer at site
- Clay cover completed in three weeks
 - Entombed fire residuals



Initial Costs of Kirby Cleanup

July through October 1999 (\$ Millions)



After the Fire

- Chain link fence – 6 feet high
- Perimeter lighting and security cameras
- Ground water monitoring
 - Semi-annual sampling
- Surface water control
 - Seeding of fire residual mounds
 - Installation of sump pumps in each mound



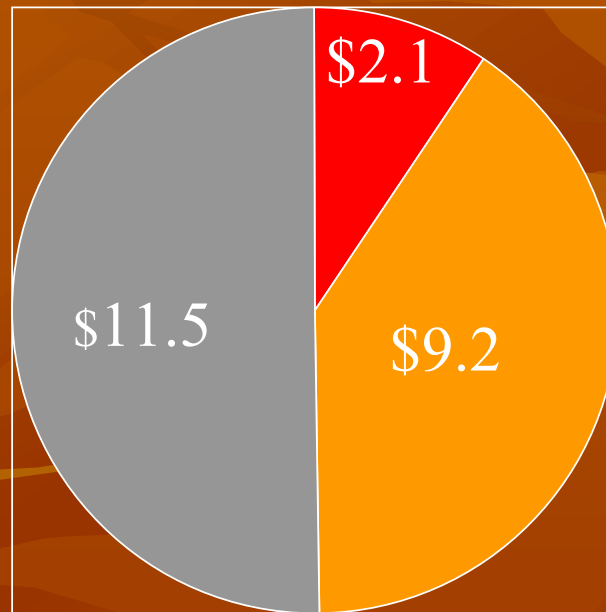
OhioEPA Problems with Burial

- Pyrolytic action continued for six months
 - Settlement of soil and clay cover, smoke venting
- Trapped pyrolytic oil
 - Oil running out of base of piles after heavy rains



Total Cost of Kirby Cleanup

Projected Costs at Completion in SFY 2007 (\$ Millions)



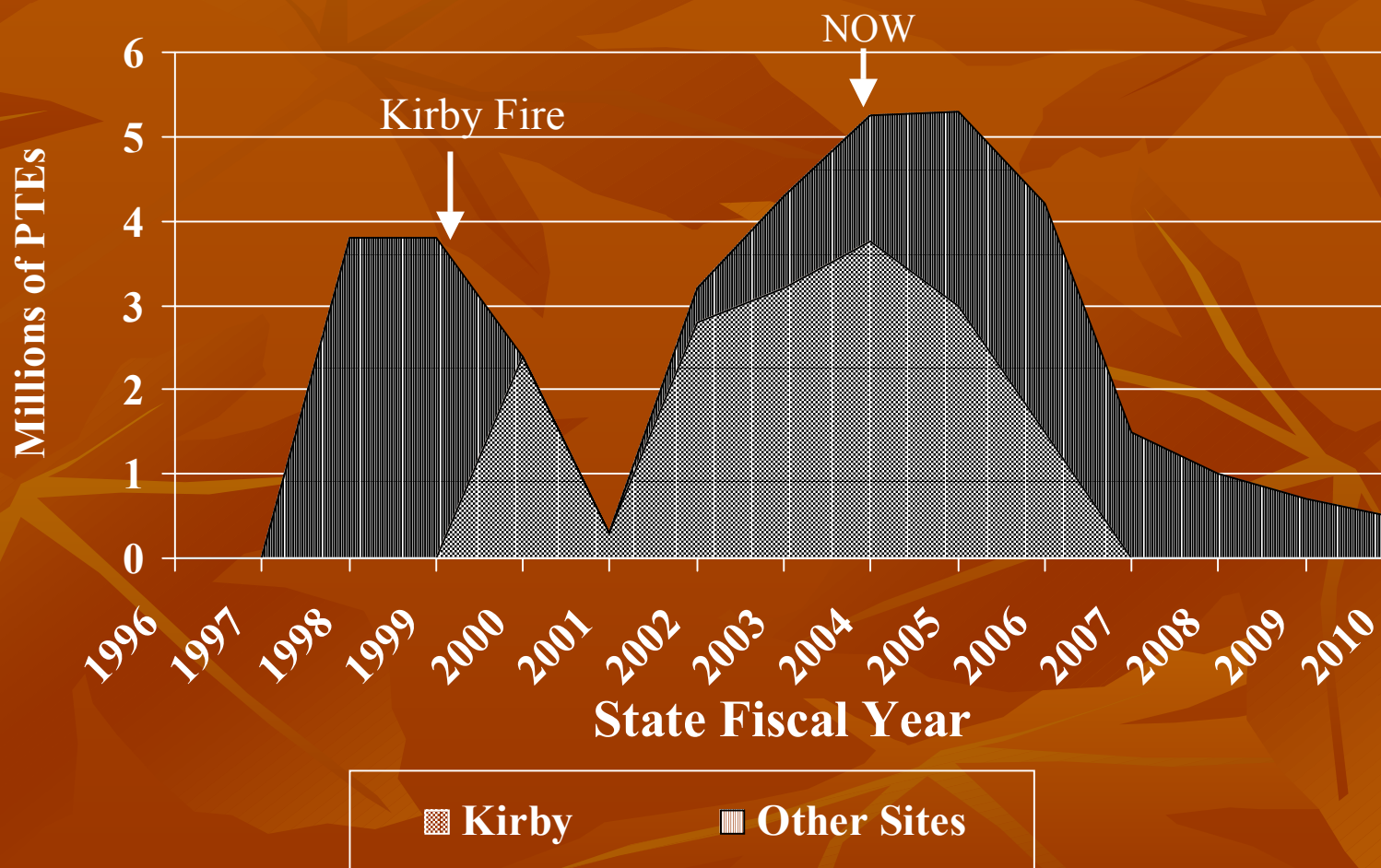
Read Clockwise



Fire impacted only
one third of the tires

Annual Scrap Tire Cleanups

Millions of Passenger Tire Equivalents (PTEs)



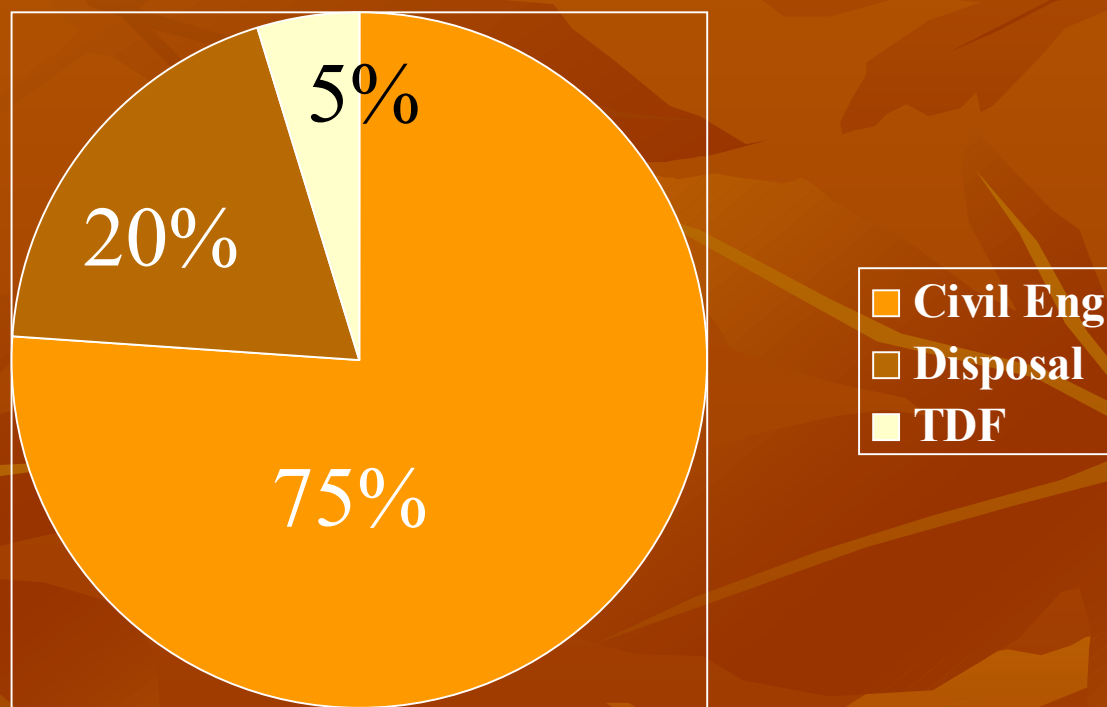
OhioEPA Kirby Scrap Tire Site

September 1999

Wyandot County, Sycamore, Ohio



Markets for Kirby Tires



Disposal includes OTR tires, other rubber products, and tires too muddy to recycle.